

**ABSTRACT**

A resistive bridge sensor circuit that includes a first resistive bridge circuit having a first variable resistance resistor and a second resistive bridge circuit having a second variable resistance resistor. The first and second resistive bridge circuits share at least a portion of a common reference leg that sets a resistance of a first and second variable resistors. The  
5 common reference leg or a portion of the common reference leg is alternately switchably connected to one of the first and second resistive bridge circuits.